to its feet with considerable difficulty. For a while he stood looking very dazed and then very slowly wandered up the low riverbank into heavy jungle.

It was time to pack up and return to camp when—a sound like a deep and heavy moan, followed by a terrific crash just inside the jungle where the elephant had been seen to enter. We had no torches and it was too dark to follow.

Next morning the elephant lay dead, only eight or nine yards within the jungle. A deep fresh gash across the left cheek caused by a sharp broken sappling. How valuable a post mortem would have been. The dung was normal and fresh. It was not old age; while it is practically certain that this elephant did not die of any injury or an old shot wound. He fell miles away from any habitation or shooting ground. Of course this is no proof knowing how wounded elephants can and do travel for miles and even days but if he had been wounded it is difficult to believe that none of us four, with a fair knowledge of the jungle and elephants, would not have noticed it. Under the tree he was lying on his left side, he fell dead on his right side. The extended and somewhat swollen organ made us wonder if death perhaps was due to some sexual reason or damage.

The true reason will never be known, the strip of film is a sad souvenir. I am writing without my diaries but believe that this was the fourth or fifth wild elephant I have found dead where it was impossible to establish any kind of reason or proof unless an expert post mortem had been possible. I remember one small elephant—later on proved to have been shot at by field watchers a week or so before—lying dead in the centre of three jungle road junctions. As far as I could ascertain it had travelled a good ten miles to get here and meet the end. The wound in the neck, by a muzzle-loader from above, was a mass of inflammation and matter some six inches in diameter.

Twice I have come across dead elephants lying in a stream or river where it was impossible to make any investigations of any value. In both instances the dying animals had of course come to the water as their last hope.

The 'burial ground' idea, although romantic, is a myth as are so many of such ideas about the wilds. The wilds hold little romance where death is concerned.

Box 15, A. C. TUTEIN NOLTHENIUS,
COLOMBO, CEYLON, F.Z.S., A.C.L.
7th January 1947.

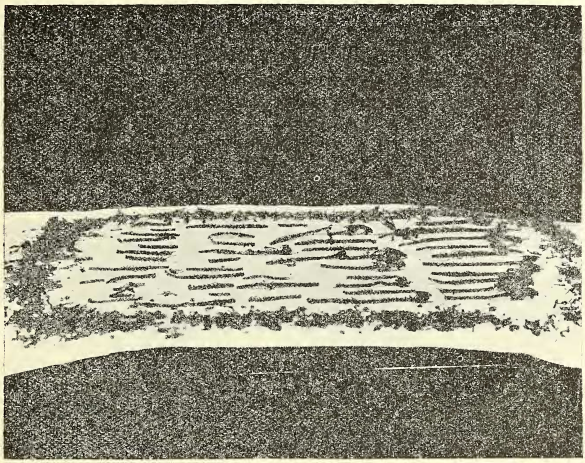
7.—THE PISCIVOROUS HABITS OF THE RORQUAL OR FIN WHALE (*BALAENOPTERA* SP.).[1]

Malabar fishermen affirm that schools of whales are commonly seen in the sea off the Malabar Coast. They come in pursuit of

[1] Published with the kind permission of the Director of Industries and Commerce, Madras.—Authors.

huge mackerel or sardine shoals. No effort is made to fish for them and these giants are seldom washed ashore. In fact there are only twelve recorded instances of whales having been stranded on this coast and these occurred within the past hundred years. Of these five were rorquals.

Recently, on the morning of the 28th January 1947, a Rorqual measuring 45 feet in length and 20 feet in girth was stranded at Naduvattam three miles south of Calicut pier. It was in an advanced state of decomposition, having been dead a few days before it was washed ashore. Behind the middle of the body all the flesh and viscera had been removed—probably bitten off by



A few mackerel skeletons from the stomach of the stranded whale

ravenous sharks or removed by nearby villagers. The vertebral column was intact.

The whale was pale black dorsally and ash coloured ventrally. Forty-two furrows could be counted on its ventral surface. The teeth were absent. The long thin bony plates characteristic of whalebone whales, called 'baleen plates' or 'whalebone' were very ill developed. One cannot be definite about this, as the mouth looked tampered with. The two nasal openings could be noted. The hand had four digits and all the other bones were intact. These characters are those of Fin Whales (*Balaenopteridae*).

Everything about this giant among the existing and extinct creatures, is interesting both from its huge dimensions and its rarity on this coast. Small wonder then that its malodorous carcass drew thousands of villagers who came to have a look at

what they called *Kadalana* in Malayalam, meaning 'Sea elephant'. But the most surprising and interesting fact had still to be revealed. The opening of its large stomach exposed the remains of hundreds of mackerels (*Rastrelliger kanagurta*), which the whale had devoured (see photo). About 500 complete skeletons were picked out, not counting the half digested mass yet to be reckoned with. It is almost sure that this creature had devoured more than a thousand mackerel. The undigestable lenses of the eyes of these fishes looking like coriander seeds could be picked up by thousands. It must be remembered that it was possible to examine only one of the chambers of the stomach. So it can safely be presumed, that this comparatively small specimen had swallowed a huge shoal of mackerels.

About the food of whalebone whales under which the Rorqual falls, Professor Adam Sedgwick writes: 'the gigantic whalebone whale which are without teeth but possess whalebone on the palate, feed on small floating marine animals, nudibranchiates, molluscs and jelly fish etc.' Frank Evers Beddard states that the interesting fact that the whales feed among swarms of pelagic creatures, which they engulf within their huge mouths, led the ancients to believe and assert that they feed on water only.

In a recent *Discovery* Report (1942) Dr. Mackintosh has reported in detail, on the food of whalebone whales in the Antarctic and warmer waters. The examination of the stomachs of several hundreds of these whales has proved beyond all doubt, that the Antarctic whalebone whales, mainly feed on shoals of a shrimp-like crustacean, *Emphausia superba*, collectively known as 'Krill'. The only recorded instance of an Antarctic whale, taking to a more substantial diet than Krill, was the case of a Blue Whale, examined on the 8th January 1938 by Major Spencer, which had consumed fifty 'ice fish' 9 to 12 inches long. According to Dr. Mackintosh, these whales which feed very heavily in Antarctic on Krill, are found to starve during their northward migrations to temperate coastal waters.

Perhaps in tropical waters the whalebone whales feed largely on fish or more likely, when in pursuit of minute floating plankton (krill), shoals of fishes, which themselves subsist on these plankton, are engulfed unintentionally. But intentionally or not, these whales and their cousins the dolphins and the porpoises, no doubt follow shoals of food fishes in schools and play regular havoc among them.

Our thanks are due to Dr. S. T. Moses, Director of Fisheries, Baroda for his kind suggestions.

Department of Fisheries, P. K. JACOB.
M. DEVIDAS MENON.
Baroda,
2nd April 1947.